Dell™ XPS™ M1210 Service Manual

Notes, Notices, and Cautions

NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

Abbreviations and Acronyms

For a complete list of abbreviations and acronyms, see "Glossary" in the *Owner's Manual*.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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Before You Begin

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This section provides procedures for removing and installing the components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- You have performed the steps in Turning Off Your Computer and Before Working Inside Your Computer.
- You have read the safety information in the Dell™ *Product Information Guide.*
- A component can be replaced or—if purchased separately—installed by performing the removal procedure in reverse order.

Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- Phillips screwdriver
- Small plastic scribe
- Flash BIOS update program CD

Turning Off Your Computer

NOTICE: To avoid losing data, save and close any open files and exit any open programs before you turn off your computer.

1. Shut down the operating system:

   Save and close any open files, exit any open programs, and click **Start→ Shut Down→ Shut down**.

   The computer turns off after the operating system shutdown process is complete.

2. Ensure that the computer and any attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for 4 seconds.

Before Working Inside Your Computer

Use the following safety guidelines to help protect your computer from potential damage and to help ensure your own personal safety.

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

NOTICE: Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

NOTICE: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.

NOTICE: Unless otherwise noted, each procedure in this document assumes that a part can be replaced by performing the removal procedure in reverse order.

NOTICE: When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

NOTICE: To help prevent damage to the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.

2. Turn off your computer (see Turning Off Your Computer).

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network device.

3. Disconnect any telephone or network cables from the computer.

4. Disconnect your computer and all attached devices from their electrical outlets.

5. Close the display and turn the computer upside down on a flat work surface.

NOTICE: To help prevent damage to the system board, remove the main battery before working inside the computer.

6. Remove the main battery:

   a. Slide the battery-bay latch release on the bottom of the computer until it clicks.

   b. Slide the battery out toward the back of the computer and lift to remove the battery from the bay.

NOTE: To replace the battery, follow the removal procedure in reverse order. When you are replacing the battery, ensure that you properly insert the two battery tabs into the corresponding slots in the base of the computer.

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1	battery-bay latch release	2	battery (9-cell battery shown)	3	battery tabs (2)

7. Turn the computer top-side up and open the display.

8. Press the power button to ground the system board.

9. Remove any installed ExpressCard from the ExpressCard slot.

10. Remove any media from the optical drive, if installed.

11. Remove the hard drive (see Removing the Hard Drive).

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Internal Card With Bluetooth® Wireless Technology

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CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTE: If you ordered an internal card with Bluetooth wireless technology with your computer, the card is already installed.

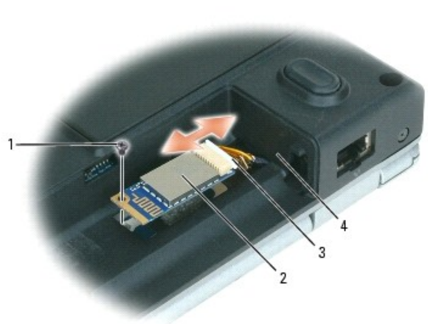
1. Follow the instructions in Before Working Inside Your Computer.

NOTE: The internal card with Bluetooth wireless technology is located in the battery bay. You must remove the main battery (as instructed in Before Working Inside Your Computer) before you can access the card.

2. Remove the M2 x 3-mm screw that secures the card in place.

3. Using your fingers or a plastic scribe, carefully pull the card out of the compartment and lift the mylar tape, if present, so that you can disconnect the card from its cable and remove it from the computer.

4. To replace the card:
   a. Connect the card to the cable and then carefully insert the card into the compartment.
   b. Replace the M2 x 3-mm screw.



1	M2 x 3-mm screw	2	internal card with Bluetooth wireless technology	3	card connector
4	battery bay				

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Camera (Optional)

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Removing the Camera

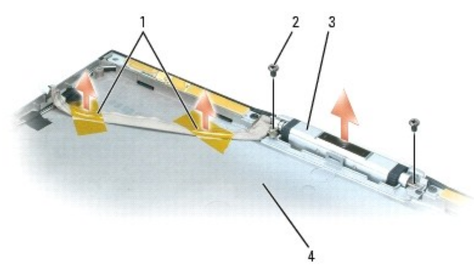
CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTE: The camera is an optional feature.

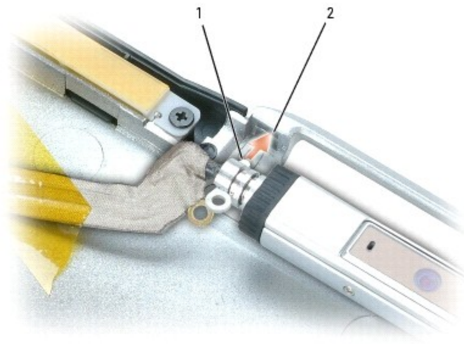
1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the display bezel (see Removing the Display Bezel).
6. Remove the display panel (see Removing the Display Panel).
7. Remove the two M2 x 3-mm screws that attach the camera to the display back cover.
8. Detach the camera cable from the display back cover by lifting the tape that secures it to the cover.



1	tape	3	camera
2	M2 x 3-mm screws (2)	4	display back cover

Replacing the Camera

1. With the camera lens facing up, insert the tab at the top-left of the camera into the detent at the bottom-left edge of the camera bezel.



1	tab	2	detent in camera bezel

2. Replace the two M2 x 3-mm screws that attach the camera to the display back cover.

3. Re-adhere the tape on the camera cable to attach the cable to the display back cover.

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Mini-Cards

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WLAN Card

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

CAUTION: Only products approved for use in your portable computer may be installed.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the procedures in Before Working Inside Your Computer.

2. Turn the computer upside down and loosen the captive screw to remove the communications card cover.



3. If a WLAN card is not already installed, go to step 4. If you are replacing a WLAN card, remove the existing card:

   a. Disconnect the two antenna cables from the WLAN card.



1	WLAN card	2	antenna cable connectors (2)

b. Release the WLAN card by pushing the metal securing tabs toward the back of the computer until the card pops up slightly.

c. Lift the WLAN card out of its system board connector.



1	metal securing tabs (2)

NOTICE: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors and realign the card.

4. Install the replacement WLAN card:

NOTICE: Do not install a Mobile Broadband card in the WLAN card slot.

a. Insert the WLAN card connector into the system board connector at a 45-degree angle, and then press the other end of the WLAN card down into the securing tabs until the card clicks into place.



NOTICE: To avoid damage to the WLAN card, never place cables under the card.

NOTE: If you are installing a WLAN card for the first time, you will find a clear-plastic protective sleeve on each antenna cable connector. Before you connect the antenna cables to the WLAN card, slide the sleeves off of the cable connectors.

b. Connect the antenna cables to the antenna connectors on the WLAN card by matching the color of the cable to the color of the triangle beside the connector. Connect the main antenna cable (white) to the antenna connector with the white triangle. Connect the auxiliary antenna cable (black) to the antenna connector with the black triangle.

NOTE: Your WLAN card may have two or three antenna connectors, depending on the type of card you ordered. If your computer has a gray antenna cable, attach it to the connector with the gray triangle, if one is available on your card.



1	antenna cable connectors (2)	2	triangles (2)

5. Replace the communications card cover.

6. If the WLAN card you just replaced is being installed in this computer for the first time, see "Using Networks" and "Drivers" in the Owner's Manual for your computer for instructions on connecting to a wireless network and installing drivers.

Mobile Broadband (WWAN) Card

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

CAUTION: Only products approved for use in your portable computer may be installed.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTE: Mobile Broadband cards are also known as WWAN cards.

1. Follow the procedures in Before Working Inside Your Computer.

2. Turn the computer upside down and loosen the captive screw to remove the communications card cover.



3. If a Mobile Broadband card is not already installed, go to step 4. If you are replacing a Mobile Broadband card, remove the existing card:

   a. Disconnect the antenna cables from the Mobile Broadband card.



1	Mobile Broadband card	2	antenna cable connectors (2)

b. Release the Mobile Broadband card by pushing the metal securing tabs toward the front of the computer until the card pops up slightly.

c. Lift the Mobile Broadband card out of its system board connector.



1	metal securing tabs (2)

NOTICE: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors on the card and on the system board, and realign the card.

4. Install the replacement Mobile Broadband card:

NOTICE: Do not install a WLAN card in the Mobile Broadband card slot.

a. Insert the Mobile Broadband card connector into the system board connector at a 45-degree angle, and then press the other end of the Mobile Broadband card down into the securing tabs until the card clicks into place.



NOTICE: To avoid damage to the Mobile Broadband card, never place cables under the card.

b. Connect the two antenna cables to the Mobile Broadband card (black [auxiliary] cable to the connector with a black triangle and the white [main] cable to the connector with a white triangle).



1	antenna cable connectors (2)

Subscriber Identity Module (SIM) Card

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

CAUTION: Only products approved for use in your portable computer may be installed.

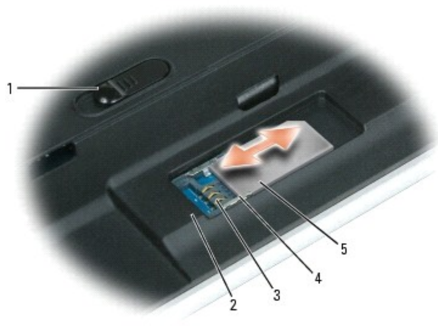
NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the procedures in Before Working Inside Your Computer.

NOTE: The SIM card is located in the battery bay. You must remove the main battery (as instructed in Before Working Inside Your Computer) before you can access the SIM card.

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1	battery-bay latch release	2	battery bay	3	SIM card connector
4	metal tabs (2)	5	SIM card		

NOTICE: To protect the SIM card from electrostatic discharge (ESD), do not touch the SIM card connector. Also, take care when removing the card to slide the card completely out of the metal tabs before lifting the card out of the slot. The card is brittle and may easily break otherwise.

2. With the cut-off corner on the card facing away from the card slot, insert the SIM card into the slot so that it slides under the metal tabs on the sides.

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Coin-Cell Battery

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Removing the Coin-Cell Battery

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.

2. Remove the hinge cover (see Removing the Hinge Cover).

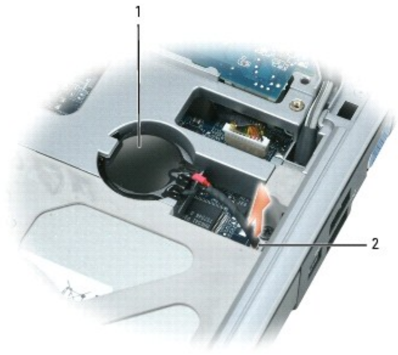
3. Remove the keyboard (see Keyboard).

4. Remove the existing coin-cell battery:

   a. Disconnect the battery cable connector from the system board.

   b. Lift the coin-cell battery out of the battery compartment.

   NOTE: You may experience slight resistance when you lift the battery because of an adhesive underneath the battery that holds it in place.



1	coin-cell battery	2	battery cable connector

Replacing the Coin-Cell Battery

1. Install the replacement battery:

   a. With the positive side up, insert the battery at a 30-degree angle into the battery compartment.

   b. Connect the battery cable to the connector on the system board.

2. Replace the keyboard (see Keyboard).

3. Replace the hinge cover (see Replacing the Hinge Cover).

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Thermal-Cooling Assembly

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Removing the Thermal-Cooling Assembly

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

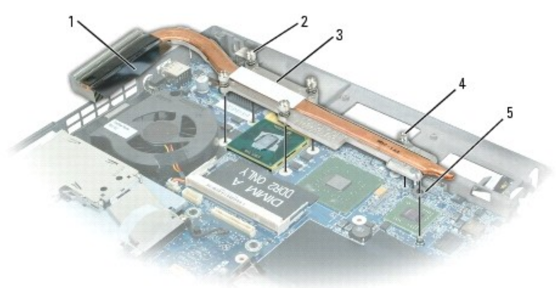
NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTE: The thermal-cooling assembly differs in appearance depending on your computer's video configuration. To determine your computer's video configuration, see "Determining Your Computer's Configuration" in the *Owner's Manual* for your computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the palm rest (see Removing the Palm Rest).
6. Loosen in consecutive order the four captive screws, labeled "1" through "4," that secure the thermal-cooling assembly to the system board.

NOTE: If the thermal-cooling assembly in your computer has a fifth screw and securing clip, go to step 7. Otherwise, skip to step 8.

7. At the end of the thermal-cooling assembly that extends over the video card, loosen the separate single captive screw and disengage the securing loop. Lift the mylar tape on the thermal-cooling assembly from the top of the fan, but do not remove the tape from the assembly.
8. Lift the thermal-cooling assembly and remove it from the system board.



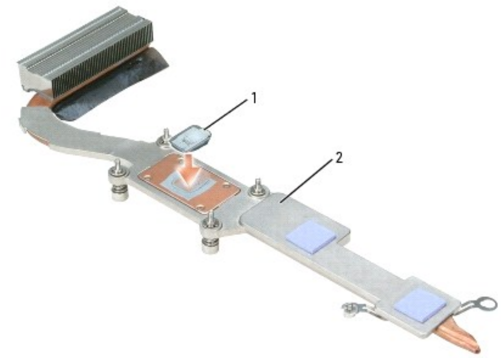
1	mylar tape	2	captive screws (4)	3	thermal-cooling assembly
4	captive screw (1) (present only on computers with discrete video)	5	securing loop (present only on computers with discrete video)		

Replacing the Thermal-Cooling Assembly

1. If you are installing a new thermal-cooling assembly, place new thermal pads on the thermal-cooling assembly, or if you are installing a new processor, place a new thermal pad on the thermal-cooling assembly at the point that covers the processor:
   a. Remove the backing from the new thermal pad, taking care not to tear the pad.

NOTE: You can place the new thermal pads directly on any existing thermal pads already installed on the thermal-cooling assembly. It is not necessary to remove an existing pad or to clean the surface.

b. On the underside of the thermal-cooling assembly, place the thermal pad(s)' adhesive-side on top of the old pad, and press it into place.



1	thermal pads (3)	2	underside of thermal-cooling assembly

NOTE: When replacing the thermal-cooling assembly, hold up the mylar flap on the thermal-cooling assembly so that the flap rests on top of the fan when the thermal-cooling assembly is in place.

2. Place the thermal-cooling assembly over the processor.

3. Tighten the four captive screws, labeled "1" through "4," in consecutive order.

4. If present, tighten the single captive screw and engage the securing loop over the video card.

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Processor Module

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Removing the Processor Module

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: Do not touch the processor die. Press and hold the processor down on the substrate on which the die is mounted while turning the cam screw to prevent intermittent contact between the cam screw and processor.

NOTICE: To avoid damage to the processor, hold the screwdriver so that it is perpendicular to the processor when turning the cam screw.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the palm rest (see Removing the Palm Rest).

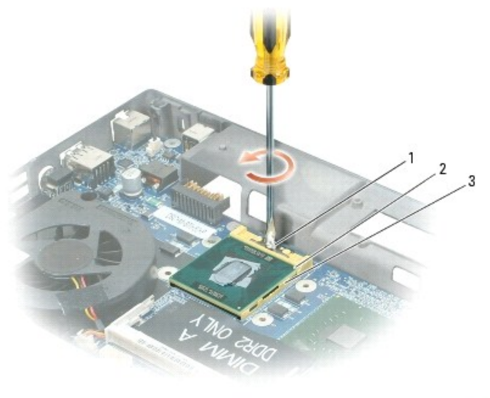
NOTICE: To ensure maximum cooling for the processor, do not touch the heat transfer areas on the processor thermal-cooling assembly. The oils in your skin reduce the heat transfer capability of the thermal pads.

6. Remove the thermal-cooling assembly (see Removing the Thermal-Cooling Assembly).

NOTICE: When removing the processor module, pull the module straight up. Be careful not to bend the pins on the processor module.

7. Loosen the ZIF socket to remove the processor module.

   To loosen the ZIF socket, use a small, flat-blade screwdriver and rotate the ZIF-socket cam screw counterclockwise until it comes to the cam stop.



1	ZIF-socket cam screw	2	pin-1 corner of processor	3	ZIF-socket

NOTE: The ZIF-socket cam screw secures the processor to the system board.

8. Lift the processor module from the ZIF socket.

Replacing the Processor Module

NOTICE: Ensure that the cam lock is in the fully open position before seating the processor module. Seating the processor module properly in the ZIF socket does not require force.

NOTICE: A processor module that is not properly seated can result in an intermittent connection or permanent damage to the processor and ZIF socket.

1. Align the pin-1 corner of the processor module with the pin-1 corner of the ZIF socket, and insert the processor module.

NOTE: The pin-1 corner of the processor module has a triangle that aligns with the triangle on the pin-1 corner of the ZIF socket.

NOTICE: You must position the processor module correctly in the ZIF socket to avoid permanent damage to the module and the socket.

When the processor module is correctly seated, all four corners are aligned at the same height. If one or more corners of the module are higher than the others, the module is not seated correctly.

2. Tighten the ZIF socket by turning the cam screw clockwise to secure the processor module to the system board.

NOTE: When you replace the thermal-cooling assembly, be sure to place a new thermal pad on the thermal-cooling assembly such that the pad fits between the assembly and the processor. You can place the new thermal pad directly on any existing thermal pad already installed on the thermal-cooling assembly. It is not necessary to remove an existing pad or to clean the surface.

NOTE: When replacing the thermal-cooling assembly, hold up the mylar flap on the assembly so that the flap rests on top of the fan when the thermal-cooling assembly is in place.

3. Replace the thermal-cooling assembly (see Replacing the Thermal-Cooling Assembly).

4. Replace in reverse order the remaining components that you removed in Removing the Processor Module, beginning with step 5.

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Display

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- [Display Assembly](#)
- [Display Bezel](#)
- [Display Panel](#)
- [Display-Panel Brackets](#)

Display Assembly

Removing the Display Assembly

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see [Before Working Inside Your Computer](#)) before working inside the computer.

1. Follow the instructions in [Before Working Inside Your Computer](#).

2. Turn the computer upside down and loosen the captive screw on the communications card cover.

NOTE: You must detach the Mini-Card (WLAN and/or Mobile Broadband) antenna cables (see [step 3](#)) before you can remove the display assembly. If a Mini-Card is installed, disconnect the antenna cables from the card(s). If one is not installed, detach the antenna cables from their secured location.

3. Disconnect the antenna cables from the Mini-Card(s), if applicable.



4. Turn the computer top-side up.

5. Remove the hinge cover (see [Removing the Hinge Cover](#)).

6. Remove the keyboard (see [Keyboard](#)).



1	display assembly	2	pull-tab on display cable	3	Mini-Card antenna cables

7. Use the pull-tab to disconnect the display cable from the system board, and then disengage the display cable from its cable channel.

8. Disengage the antenna cables from their cable channel.

9. Remove the four M2.5 x 8-mm screws (two labeled "D" on the bottom of the computer, and two labeled "D" on the back of the computer) that connect the display to the computer base.



NOTICE: When removing the display assembly, carefully unthread the Mini-Card antenna cables through the computer base and ensure that the plastic protectors—if present—remain on the individual cables.

10. Lift the display assembly away from the computer.

Replacing the Display Assembly

NOTICE: When replacing the display assembly, ensure that the plastic protectors—if present—remain on the individual Mini-Card antenna cables.

1. Thread the Mini-Card antenna cables back through the hole in the base of the computer so that they are accessible from the bottom of the computer.

2. Align the two hinge pins on the display assembly over the corresponding holes in the base of the computer.

3. Replace the four M2.5 x 8-mm screws on the bottom and back of the computer.

4. Connect the display cable to the system board.

5. Reroute the display cable in the cable channel.

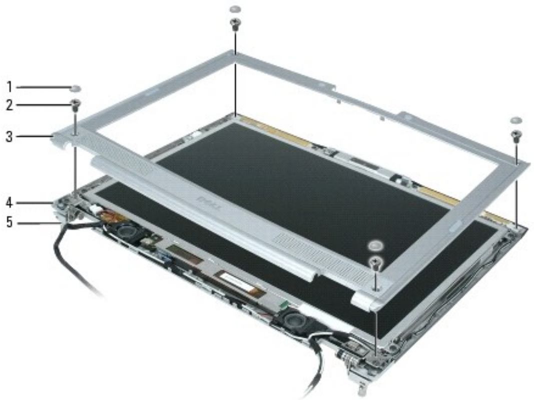
6. Reroute the antenna cables in their cable channel.

7. Replace the hinge cover (see Replacing the Hinge Cover).

8. If any Mini-Cards are installed, connect the antenna cables to the card(s) (see Mini-Cards). If no Mini- Cards are installed, tuck the antenna cables into their secured location.

9. Replace the communications card cover.

Display Bezel



1	rubber bumper/screw covers (4)	3	display bezel
2	M2.5 x 5-mm shoulder screws (4)	4	display back cover
5	hinge pins (2)		

Removing the Display Bezel

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.

2. Remove the display assembly (see Removing the Display Assembly).

3. Remove the four rubber bumper/screw covers.

4. Remove the four M2.5 x 5-mm shoulder screws at the corners of the bezel.

NOTICE: Removal of the bezel from the display back cover requires extreme care to avoid damage to the bezel and the display panel.

5. Use your fingers to separate the bezel from the display back cover:

   a. Starting at the center of the bottom of the bezel, lift the inside edge by pulling up and slightly downward toward the outside edge of the display assembly to unsnap the bezel from the display back cover.

   b. Repeat step a to release the snaps around the rest of the bezel and lift it away from the display panel.

Replacing the Display Bezel

1. Starting at any corner, use your fingers to gently snap the bezel into place to secure it to the display panel.

NOTE: To facilitate replacement of the display bezel, ensure that the camera connector is tucked in place beside the display panel before you snap the bezel into place.

2. Replace the four M2.5 x 5-mm screws on the corners of the bezel.

3. Replace the four rubber bumper/screw covers around the bezel.

Display Panel

Removing the Display Panel



1	camera cable connector (present only on computers with an optional camera)	3	display panel	5	display back cover
2	M2 x 3-mm screws (4)	4	M2 x 3-mm display-cable ground screw and ground wire	6	speaker cable

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.

2. Remove the display assembly (see Removing the Display Assembly).

3. Remove the display bezel (see Removing the Display Bezel).

4. If an optional camera is present on the computer, disconnect the camera cable connector.

5. Remove the four M2 x 3-mm screws (two on each side of the display panel).

6. Remove the M2 x 3-mm ground screw that attaches the display-panel ground wire to the display back cover.

7. Turn the display assembly over so that the display panel is face down and the display hinges are toward you.

8. Lift the display back only enough to allow you to disconnect the speaker connector.

9. Lift the display back cover away from the display panel.

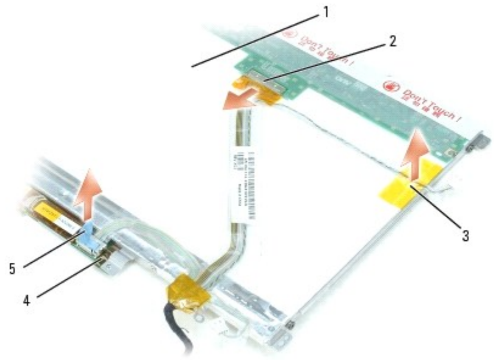
10. Remove the display-panel brackets from the display panel (see Removing the Display-Panel Brackets).

11. Remove the cable assembly from the back of the display panel:

a. Use the pull-tab to disconnect the bottom flex-cable connector from the inverter connector.

b. Lift the tape, if present, as necessary to pull the top flex-cable connector away from the display connector.

c. If an optional camera is present on the computer, lift the tape that holds the camera cable in place on the back of the display panel.



1	back of display-panel cable assembly	3	tape holding camera cable in place	5	pull-tab on inverter connector
2	top flex-cable connector	4	bottom flex-cable connector		

Replacing the Display Panel

1. Reconnect the cable assembly to the back of the display panel.
2. Replace the display-panel brackets on the display panel (seeReplacing the Display-Panel Brackets).
3. Place the display panel inside the display back cover.
4. Reconnect the speaker connector.
5. Reconnect the camera connector (if an optional camera is present).
6. Replace the M2 x 3-mm ground screw that attaches the display-panel ground wire to the display back cover.
7. Replace the four M2 x 3-mm screws (two on each side) that connect the display panel to the display back cover.
8. Replace the display bezel (see Replacing the Display Bezel).

Display-Panel Brackets

Removing the Display-Panel Brackets

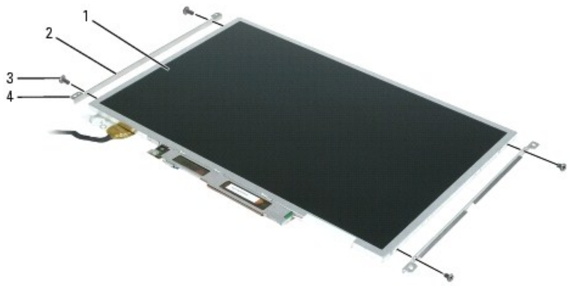
CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the display assembly (see Removing the Display Assembly).
3. Remove the display bezel (see Removing the Display Bezel).
4. Remove the display panel (see Removing the Display Panel).

5. Remove the four M2 x 3-mm screws (two on each side) that attach the two display-panel brackets to the display panel.



1	display panel	3	M2 x 3-mm screws (4)
2	display-panel brackets (2)	4	tabs on display-panel brackets (4)

Replacing the Display-Panel Brackets

NOTICE: Ensure that you attach the display-panel brackets to the display panel such that the tabs are flush with the display panel surface.

1. Replace the four M2 x 3-mm screws to re-attach the display-panel brackets to the display panel.
2. Reattach the display bezel (see Removing the Display Bezel) to the display panel.
3. Reattach the display panel (see Removing the Display Panel) to the display back cover.
4. Replace the display assembly (see Removing the Display Assembly).

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Fan

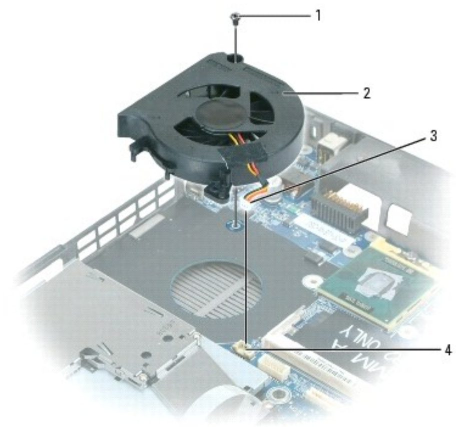
Dell™ XPS™ M1210 Service Manual

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the M2.5 x 8-mm screw from the fan, and then disconnect the fan cable from the system board.
7. Lift the fan out of the computer.



1	M2.5 x 8-mm screw	3	fan cable
2	fan	4	connector on system board

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Flashing the BIOS

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NOTICE: Plug the AC adapter into a known good power source to prevent a loss of power. Failure to do so may cause system damage.

1. Ensure that the AC adapter is plugged in and that the main battery is installed properly.

NOTE: If you use a BIOS update program CD to flash the BIOS, press <F12> before inserting the CD so that you can set up the computer to boot from a CD this one time only. Otherwise, you must enter the system setup program to change the default boot order.

2. Insert the BIOS update program CD, and turn on the computer.

NOTICE: Do not interrupt this process once it begins. Doing so may cause system damage.

Follow the instructions that appear on the screen. The computer continues to boot and updates the new BIOS. When the flash update is complete, the computer will automatically reboot.

3. Press <F2> during POST to enter the system setup program.
4. Press <Alt> and <f> to reset the computer defaults.
5. Press <Esc>, select **Save changes and reboot**, and press <Enter> to save configuration changes.
6. Remove the flash BIOS update program CD from the drive and restart the computer.

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Hard Drive Bay/ExpressCard Cage Assembly

Dell™ XPS™ M1210 Service Manual

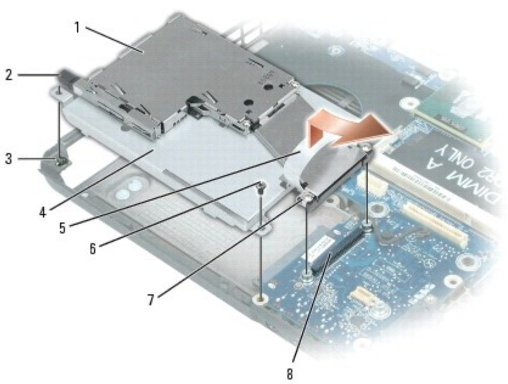
CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTE: You can remove the hard drive bay without removing the ExpressCard cage from the bay.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the fan (see Fan).
7. Loosen the two captive screws on the ExpressCard cage connector.



1	ExpressCard cage	4	hard drive bay	7	ExpressCard cage connector with captive screws (2)
2	ExpressCard eject button	5	pull-strap	8	ExpressCard cage connector on system board
3	captive screw	6	M2.5 x 5-mm screw		

8. Remove the M2.5 x 5-mm screw that attaches hard drive bay to the computer base.
9. Ensure that the ExpressCard eject button is pushed in.
10. Rotate the hard drive bay/ExpressCard cage assembly up and to the left on the captive screw to facilitate removal of the assembly from the computer base.

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Hard Drive

Dell™ XPS™ M1210 Service Manual

Removing the Hard Drive

CAUTION: If you remove the hard drive from the computer when the drive is hot, *do not touch* the metal housing of the hard drive.

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

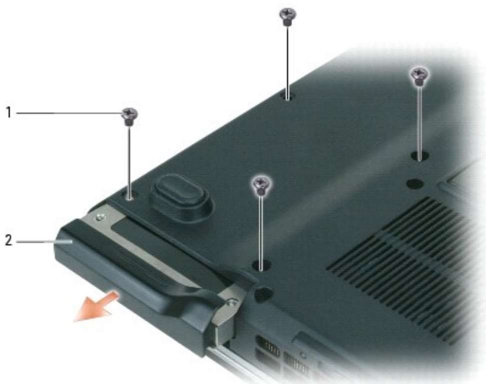
NOTICE: To prevent data loss, turn off your computer (see Turning Off Your Computer) before removing the hard drive. Do not remove the hard drive while the computer is on, in standby mode, or in hibernate mode.

NOTICE: Hard drives are extremely fragile; even a slight bump can damage the drive.

NOTE: Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.

1. Follow the instructions in Before Working Inside Your Computer.

2. Turn the computer upside down and remove the four M3 x 3-mm screws.

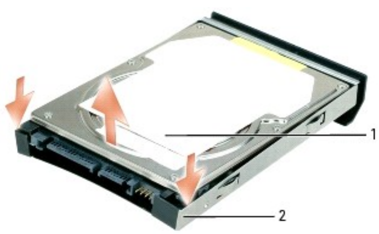


1	M3 x 3-mm hard drive screws (4)	2	hard drive

NOTICE: When the hard drive is not in the computer, store it in protective antistatic packaging. See "Protecting Against Electrostatic Discharge" in your *Product Information Guide*.

3. Slide the hard drive out of the computer.

4. Remove the hard drive from the hard drive carrier by carefully bending the carrier plastics with your fingers.



1	hard drive	2	hard drive carrier

Replacing the Hard Drive

1. Place the new drive in the hard drive carrier from which you removed the original hard drive.

NOTICE: Use firm and even pressure to slide the drive into place. If you use excessive force, you may damage the connector.

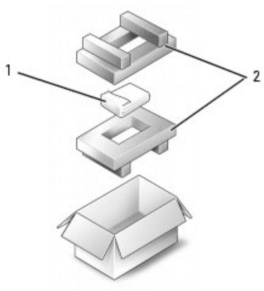
2. Slide the drive into the bay until it is fully seated.

3. Replace and tighten the four M3 x 3-mm hard-drive screws.

4. If you have installed a replacement hard drive, reinstall the Microsoft® Windows® operating system and the drivers for the new hard drive. For instructions, see "Restoring Your Operating System" and "Reinstalling Drivers and Utilities" in the *Owner's Manual.* Instructions for alternative solutions are available at **support.dell.com/pcrt**.

Returning a Hard Drive to Dell

Return your old hard drive to Dell in its original or comparable foam packaging. Otherwise, the hard drive may be damaged in transit.



1	hard drive	2	foam packaging

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Hinge Cover

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Removing the Hinge Cover

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

NOTICE: The hinge cover is fragile and can be damaged if extreme force is used. Be careful when removing the hinge cover.

1. Follow the instructions in Before Working Inside Your Computer.

2. Open the display all the way (180 degrees) so that it lies flat against your work surface.

NOTICE: To avoid damage to the hinge cover, do not lift the cover on both sides simultaneously.

3. Insert a plastic scribe into the indent to the right side of the hinge cover, and gently pry the hinge cover loose.

4. Ease the hinge cover up, moving from right to left, and remove the cover.



1	hinge cover	2	plastic scribe

Replacing the Hinge Cover

With the display open all the way (180 degrees) so that it lies flat against the work surface, insert the left edge of the hinge cover and then press down from left to right until the cover snaps into place.

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Keyboard

Dell™ XPS™ M1210 Service Manual

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

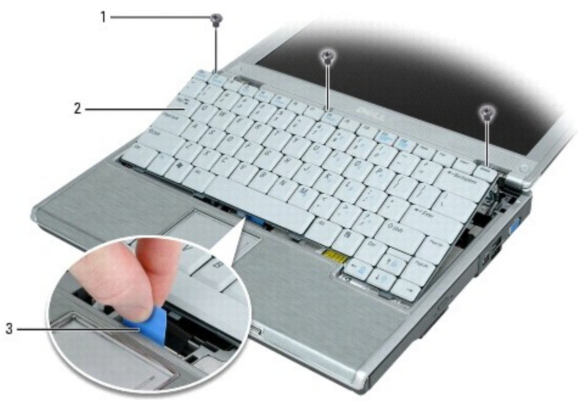
NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the three M2.5 x 5-mm screws at the top of the keyboard.

NOTICE: The key caps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.

4. Lift the keyboard only enough to hold it up and slightly forward to allow access to the keyboard connector on the system board.
5. Pull up on the keyboard-connector pull-tab to disconnect the keyboard cable from the system board.
6. Remove the keyboard.

NOTICE: To avoid scratching the palm rest when replacing the keyboard, hook the tabs along the front edge of the keyboard into the palm rest, and then press on the right edge near the top to snap the keyboard into place before replacing the three screws at the top of the keyboard.



1	M2.5 x 5-mm screws (3)	2	keyboard	3	keyboard-connector pull-tab

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Memory Module(s)

Dell™ XPS™ M1210 Service Manual

Removing the Memory Module(s)

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see [Before Working Inside Your Computer](#)) before working inside the computer.

NOTE: Memory modules purchased from Dell are covered under your computer warranty.

NOTE: Your computer has two memory module connectors: "DIMM B" is located at the bottom of the computer, and "DIMM A" is located underneath the keyboard.

1. Follow the instructions in [Before Working Inside Your Computer](#).

2. Remove the memory module in the connector labeled "DIMM B" which is located at the bottom of the computer:

   a. Turn the computer upside down, loosen the captive screw on the memory module cover, and remove the cover.

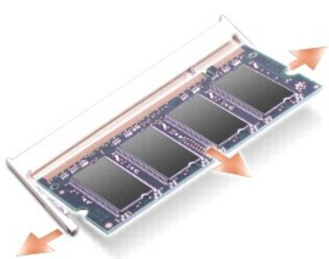


NOTICE: To prevent damage to the memory module connector, do not use tools to spread the securing clips that secure the memory module.

NOTICE: Handle memory modules by their edges, and do not touch the components on a module.

   b. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.

   c. Remove the module from the connector at a 45-degree angle.



3. Remove the memory module from the connector labeled "DIMM A" which is located underneath the keyboard:

   a. Turn the computer topside up, and remove the hinge cover (see [Removing the Hinge Cover](#)).

   b. Remove the keyboard (see [Keyboard](#)).



1	securing clips (2)

c. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.

d. Remove the module from the connector at a 45-degree angle.

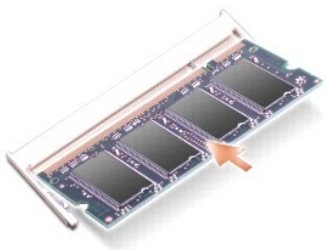
Replacing the Memory Module(s)

NOTE: If a memory module is not installed properly, the computer does not boot properly. No error message indicates this failure.

1. Ground yourself and install the new memory module:

   a. Align the notch in the module edge connector with the tab in the connector slot.

   b. Slide the module firmly into the slot at a 45-degree angle, and rotate the module down until it clicks into place. If you do not feel the click, remove the module and reinstall it.



2. *For the memory module in the "DIMM A" connector*, replace the keyboard and then replace the hinge cover.

   For the memory module in the "DIMM B" connector, replace the memory module cover and tighten the captive screw.

NOTICE: If the memory module cover is difficult to close, remove the module and reinstall it. Forcing the cover to close may damage your computer.

3. Insert the battery into the battery bay, and connect the AC adapter to your computer and an electrical outlet.

4. Turn on the computer.

As the computer boots, it detects the additional memory and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer, click **Start**→ **Help and Support**→ **Dell System Information.**

NOTE: Since the computer operating system reserves some memory for system files and activities, the amount of available memory that is displayed will be less than the total memory installed. If you install two 2-GB memory modules for a total of 4 GB, the memory total is reported as being less than 4 GB in the system setup program and by the Microsoft® Windows® operating system.

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Modem

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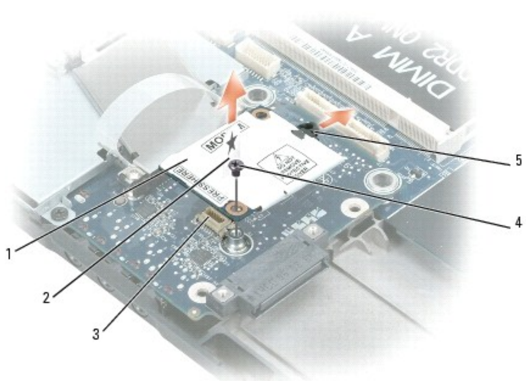
Removing the Modem

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hinge cover (see Removing the Hinge Cover).
3. Remove the keyboard (see Keyboard).
4. Remove the display assembly (see Removing the Display Assembly).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the M2 x 3-mm screw that attaches the modem to the system board.
7. Pull up on the pull-tab to disconnect the modem from the system board connector .



1	modem	2	pull-tab	3	system board connector
4	M2 x 3-mm screw	5	modem cable		

NOTICE: Do not disconnect the modem cable from the system board.

8. Disconnect the modem cable from the modem.

Replacing the Modem

1. Connect the modem cable to the modem.

NOTICE: Ensure that the modem cable is routed correctly when you replace the modem.

2. Connect the modem to the system board.

   Align the connector on the bottom of the modem with the modem connector on the system board, and press down on the end of the modem labeled "PRESS HERE."

3. Replace the M2 x 3-mm screw.

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Optical Drive

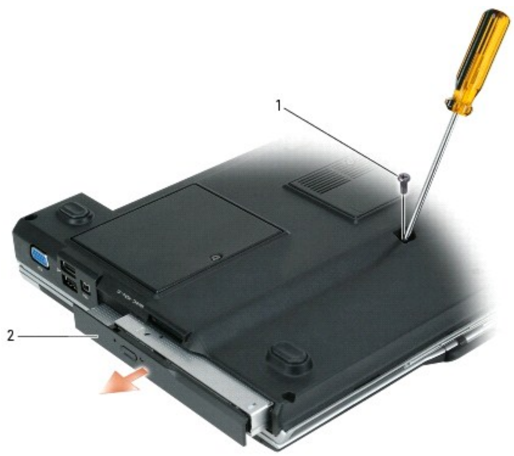
Dell™ XPS™ M1210 Service Manual

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

Your computer ships with a fixed optical drive installed.

NOTICE: To help prevent damage to drives, store them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

1. Follow the instructions in Before Working Inside Your Computer.
2. Turn the computer upside down and remove the M2.5 x 8-mm optical-drive locking screw labeled with a lock icon (🔒).
3. Insert a scribe into the indentation for the optical-drive locking screw, and push the notch on the metal tab to release the drive from the bay.
4. Pull the drive out of the drive bay.



1	M2.5 x 8-mm optical-drive locking screw	2	optical drive

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Palm Rest

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Removing the Palm Rest

CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

1. Follow the instructions in Before Working Inside Your Computer.

2. Remove the M2 x 3-mm screw from the internal card with Bluetooth® wireless technology (if installed).

3. Remove the optical drive (see Optical Drive).

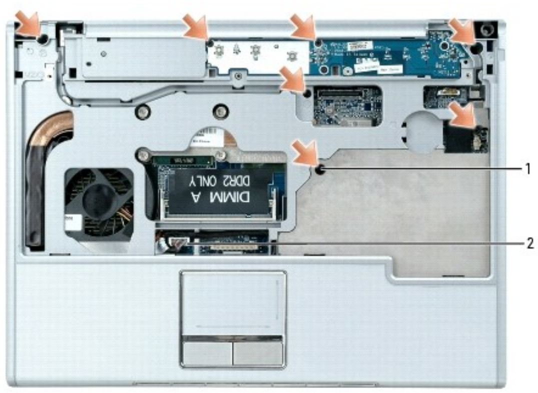
4. Remove the hinge cover (see Removing the Hinge Cover).

5. Remove the keyboard (see Keyboard).

6. Remove the display assembly (see Removing the Display Assembly).

7. Remove the seven M2.5 x 5-mm screws labeled "P" from the top side of the palm rest.

NOTE: The screw locations may vary slightly from the image shown.



1	M2.5 x 5-mm screws (7)	2	touch-pad connector

8. Disconnect the coin-cell battery cable from the system board.

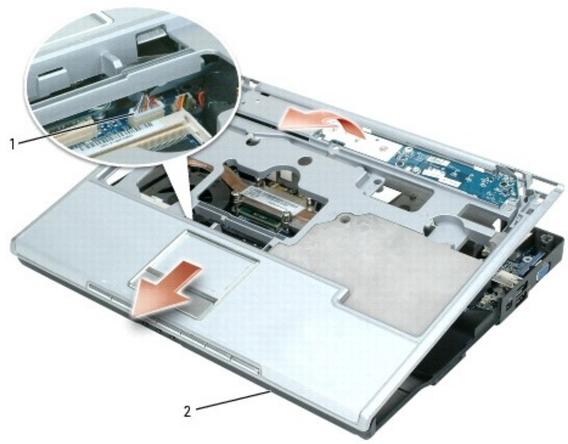
9. Disconnect the touch-pad connector from the system board.

   NOTE: If you are unable to reach the touch-pad connector with the palm rest in place, you may want to wait until step 11 when you can raise the palm rest enough to reach under it and access the touch-pad connector.

10. Turn the computer upside down, loosen the captive screw, and remove the four M2.5 x 8-mm screws from the bottom of the computer.



1	M2.5 x 8-mm screws (4)	2	captive screw



1	touch-pad connector	2	tabs (4)

11. Lift the palm rest from the computer base:

    a. Raise the palm rest at the back of the computer.

    NOTE: If you were unable to disconnect the touch-pad connector with the palm rest in place (step 9), reach under the palm rest to disconnect the touch-pad connector from the system board.

    b. Slide the palm rest toward the front of the computer to release it from the four small tabs along the front of the computer base, and remove it from the computer.

Replacing the Palm Rest

1. Align the palm rest with the computer base and gently snap the palm rest into place, taking care to align the tabs at the front of the base with the corresponding notches in the palm rest.

2. Reconnect the touch-pad connector to the system board.

3. Replace the coin-cell battery, if appropriate (see Replacing the Coin-Cell Battery).

4. Reconnect the coin-cell battery cable to the system board.

5. Replace the seven M2.5 x 5-mm screws on the top side of the palm rest.

6. Turn the computer upside down, tighten the captive screw and replace the four M2.5 x 8-mm screws on the bottom of the computer.

7. Replace the display assembly (see Replacing the Display Assembly).

8. Replace the keyboard (see Keyboard).
9. Replace the hinge cover (see Replacing the Hinge Cover).

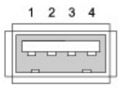
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Pin Assignments for I/O Connectors

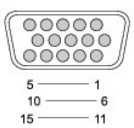
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USB Connector



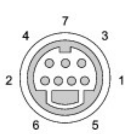
Pin	Signal
1	USB5V+
2	USBP–
3	USBP+
4	GND

Video Connector



Pin	Signal	Pin	Signal
1	CRT_R	9	5V+
2	CRT_G	10	GND
3	CRT_B	11	MONITOR_DETECT–
4	NC	12	DDC_DATA
5	GND	13	CRT_HS
6	GND	14	CRT_VS
7	GND	15	DDC_CLK
8	GND		

S-Video TV-Out Connector

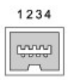


S-Video	
Pin	**Signal**
1	GND

2	GND
3	DLUMA-L
4	DCRMA-L

Composite Video	
Pin	**Signal**
5	NC
6	DCMPS-L
7	GND

IEEE 1394 Connector



Pin	Signal
1	TPB−
2	TPB+
3	TPA−
4	TPA+

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System Board

Dell™ XPS™ M1210 Service Manual

- Removing the System Board
- Replacing the System Board

Removing the System Board

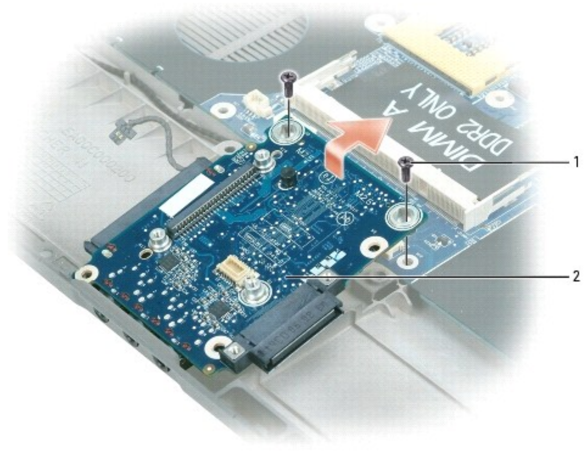
CAUTION: Before you begin the following procedure, follow the safety instructions in the *Product Information Guide*.

NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

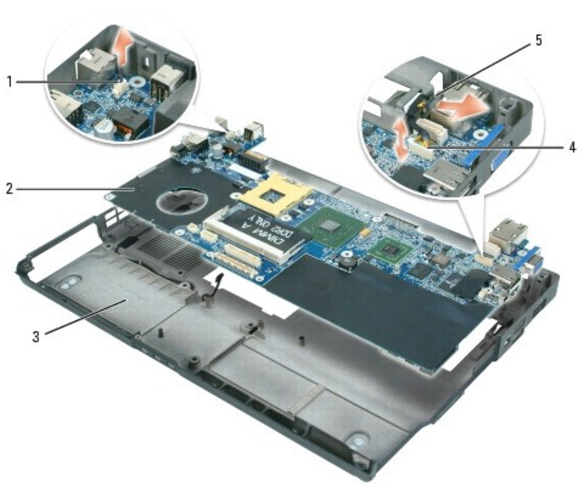
NOTICE: To help prevent damage to the system board, remove the main battery (see Before Working Inside Your Computer) before working inside the computer.

The system board's BIOS chip contains the Service Tag, which is also visible on a barcode label on the bottom of the computer. The replacement kit for the system board includes a CD that provides a utility for transferring the Service Tag to the replacement system board.

1. Follow the instructions in Before Working Inside Your Computer.
2. Remove the hard drive (see Removing the Hard Drive).
3. Remove the optical drive (see Optical Drive).
4. Remove the memory module accessible from the bottom of the computer (see Removing the Memory Module(s)).
5. Remove any installed WLAN and/or Mobile Broadband Mini-Cards (see Mini-Cards).
6. Remove the hinge cover (see Removing the Hinge Cover).
7. Remove the keyboard (see Keyboard).
8. Remove the memory module accessible from the top of the computer, underneath the keyboard (see Removing the Memory Module(s)).
9. Remove the display assembly (see Removing the Display Assembly).
10. Remove the palm rest (see Removing the Palm Rest).
11. Remove the modem (see Removing the Modem).
12. Remove the hard drive bay/ExpressCard cage assembly (see Hard Drive Bay/ExpressCard Cage Assembly.
13. Disconnect the modem cable connector from the system board.
14. Disconnect the connector for the internal card with Bluetooth® wireless technology from the system board.
15. Remove the thermal-cooling assembly (see Removing the Thermal-Cooling Assembly).
16. Remove the processor (see Removing the Processor Module).
17. Remove the two M2.5 x 5-mm screws that secure the input/output daughter card to the system board, and remove the card from the computer base.
18. Remove the system board, slowly easing the connectors out of their access holes on the back and side of the computer base:
    a. With the front of the computer facing you, grasp the lower-right corner of the system board and lift it slightly.
    b. Pull the system board assembly slightly toward you and to the right of the computer; at the same time, use your left hand to release the connectors by pulling the side of the computer base slightly to the left.



1	M2.5 x 5-mm screws (2)	2	input/output daughter card



1	modem cable connector on system board	3	computer base	5	cable connector for the internal card with Bluetooth wireless technology
2	system board	4	system board connector for the internal card with Bluetooth wireless technology		

Replacing the System Board

1. Replace in reverse order all of the components that you removed in Removing the System Board.

NOTICE: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

2. Turn on the computer.

NOTE: If you use a BIOS update program CD to flash the BIOS, press <F12> before inserting the CD so that you can set up the computer to boot from a CD this one time only. Otherwise, you must enter the system setup program to change the default boot order.

3. Insert the flash BIOS update program CD that accompanied the replacement system board into the optical drive. Follow the instructions that appear on the screen. See Flashing the BIOS for further information.

4. Enter the system setup program to update the BIOS on the new system board with the computer Service Tag.

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NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

For a complete list of abbreviations and acronyms, see "Glossary" in the *Owner's Manual*.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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